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Fiscal Policy Spillovers in a Monetary Union*

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We examine, within a monetary union framework, cross-country spillovers arising from government consumption and government investment, conditional on active and passive monetary policy. To do so, we use two models from different classes, a DSGE model and a traditional structural model. The main finding is that expansionary fiscal shocks in the rest of the euro area can lead to non-negligible spillovers to the Irish economy, in particular if the monetary policy stance is supportive. In this case, spillovers lead to a stimulus that increases the fiscal space of the country with positive spillovers.

European policymakers are increasingly turning to fiscal policy, as an alternative to monetary policy, for business cycle stabilisation. The reason for this is partly due to the low interest rate environment in the euro area, but ongoing downside risks and differences in fiscal space across countries are other important factors. Appealing to fiscal policy for managing business cycles is a step away from the traditional view that fiscal policy should instead focus on issues of long-term sustainability. This change in view raises questions about the potential for fiscal policy spillovers in a monetary union. For example, one of the key issues is whether members of the monetary union with sufficient fiscal space can run expansionary fiscal policies to benefit the union as a whole and to help other members who lack fiscal space.

The empirical literature often finds mixed results, typically estimating that fiscal spillovers

are relatively small, but non-negligible. The literature also finds that the size of the spillovers depends on a number of factors, such as the overall size of the stimulus, the type of fiscal instrument used, the direct import content of government spending, and the stance of monetary policy.

In this brief, we contribute to the debate by investigating fiscal policy shocks in the euro area under the conditions of (i) active monetary policy and (ii) passive monetary policy. To do this we run a simulation exercise using two different types of models used by central banks; a DSGE model and a traditional macroeconometric modelling framework. One of the reasons for doing this is to control for model uncertainty.

Specifically, we simulate a temporary (one year) expansionary fiscal shock in the rest of the euro area and examine the spillovers to the Irish

* The views in this note do not represent the views of the Central Bank of Ireland or of the European Central Bank.

economy. We do so under two assumptions regarding monetary policy. In the first case, we assume that monetary policy is active and the central bank raises interest rates following the fiscal expansion. In the second case, we assume that monetary policy is passive (supportive) and keeps interest rates unchanged for two years (which is broadly consistent with the current forward guidance). Furthermore, we consider two fiscal instruments, government consumption and government investment, and examine the effects of each fiscal shock in isolation. For details, see Lozej and Walsh (2022).

Overall, we find that fiscal spending shocks in the rest of the euro area can lead to non-negligible spillovers to the Irish economy when the monetary policy stance is passive and does not react to the fiscal shock. However, we find mixed results when the monetary policy stance is active – while modest spillovers are found using the traditional macroeconomic framework, the DSGE model finds negligible spillovers (see Figure 1 for a summary of the effects of fiscal spending shocks on output in our simulations).

Three main transmission channels can explain our results; namely, the (i) trade channel (ii) the competitiveness channel, and (iii) the interest rate channel. In the DSGE model, the trade and competitiveness channels give rise to modest fiscal spillovers, but the interest rate channel is very strong and can eliminate the spillovers if monetary policy is active (and, if monetary policy is passive, it amplifies the spillovers). In the traditional macroeconomic framework, the trade channel is the primary channel through which spillovers occur, while the interest rate channel has little effect.

Part of the reason why we find relatively modest spillovers is that the direct import content of government spending is negligible, so that there is no direct transmission of government spending in the rest of the euro area to foreign demand for Irish goods. There are, however, several indirect channels, and these channels

have different strengths across the two classes of models we use.

First, if government spending (either consumption or investment) increases private spending, which has a significant import content, then spillovers through foreign demand are larger. However, if due to crowding-out an increase in government spending reduces private demand, then this channel leads to negative spillovers of fiscal policy. We find that crowding-out effects tend to be stronger in the DSGE model than in the traditional structural model.

Second, if the euro area wide interest rate increases in response to fiscal expansion, and because Ireland shares the interest rate with the rest of the euro area, there is also a negative effect on domestic demand in Ireland from higher interest rates. Here, the DSGE model is again more sensitive than the traditional structural model.

Third, there is also a positive effect from the competitiveness channel. Because fiscal expansion in the rest of the euro area causes a relatively strong increase in inflation, Irish exports become cheaper, which causes a re-orientation of imports in the rest of the euro area towards Irish goods. This channel, due to the effective real exchange depreciation for Ireland, and strong openness of the economy, operates in both types of models at a similar intensity.

In addition, when monetary policy is passive, spillovers and the corresponding stimulus of the Irish economy also generate additional revenues for the government, which leads to a fall in the level of public debt (and even larger fall in public debt to GDP ratio, because GDP increases). This implies that, if successful, expansionary fiscal policies in those members of the EA that have fiscal space could create (or improve) fiscal space in those EA members that lack such space. This is a robust finding across both types of models when monetary policy is passive.

Another robust finding concerns the persistence of spillovers. These tend to be short-lived if fiscal expansion takes the form of government consumption increase, but more persistent if fiscal expansion is in terms of government investment. The main reason is that fiscal expansion through government investment has long-lasting effects on the stock of public capital, which causes longer-lasting positive effects on private consumption and investment, and hence on spillovers.

Perhaps surprisingly, our results for the case when monetary policy is passive are quite similar across both models, even though the transmission channels differ. This correspondence of results across models is of interest, because both types of models are widely used for policy analysis in many institutions, although not necessarily in parallel. The fact that we obtain very similar results in both indicates that institutions relying on only one of the types may not be worse or better than those relying on the other type, as long as the final outcome is of interest. However, if the exact transmission mechanism of the shock is important, then it can matter a lot which of the models is used.

Our findings regarding the size of spillovers are broadly in line with empirical evidence reported in Beetsma et al. (2006) and Beetsma and Giuliodori (2011), but only when monetary policy is passive. The comparison, however, is difficult, because they only look at a fiscal expansion in Germany and do not distinguish between government investment and government consumption spending. However, since the ECB does not react to country-specific developments, the comparison with our passive monetary policy setting is more appropriate. This also holds if one compares our findings to the empirical results in Alloza et al. (2019), who consider fiscal policy spillovers between countries within the monetary union, where each country is only a part of the monetary

union (so that union-wide interest rate does not react fully). Interestingly, they find spillovers from government investment large, while we find them more persistent.

In contrast to Cwik and Wieland (2011), we find positive spillovers even when monetary policy is active, but they tend to be relatively small. The main channel that generates these spillovers is the competitiveness channel, as Irish goods become relatively cheaper than the goods in the rest of the euro area following fiscal expansion in the rest of the euro area. One should bear in mind that Ireland is an example of a very open economy, so one does expect spillovers to be important, in line with the findings of Ivanova and Weber (2011) and Montinari and Stracca (2016). Our findings also suggest that both government investment spending and government consumption spending can cause business cycles in the euro area to co-move, which is in line with empirical findings in Degiannakis et al. (2016). However, our findings indicate that the degree of business cycle comovement increases, conditional on government expenditure shocks, if monetary policy is passive. Note that in contrast with most of the literature, our models are relatively rich, allowing for tradable and non-tradable goods, and the distinction between government consumption and investment turns out to be important, especially for the persistence of spillovers. Also, we can analyse the role of monetary policy, which supplements previous DSGE-literature (e.g., Naraidoo et al. (2017)). Moreover, we can investigate the transmission channels of shocks, which enables us to explain under which circumstances spillovers can be large, which tends to be the case when the competitiveness channel is strong. For example, a strong competitiveness channel could be the reason why Hebous and Zimmermann (2013) find that spillovers can have stronger effect on output than own fiscal expansion, which is somewhat at odds with most of the literature.

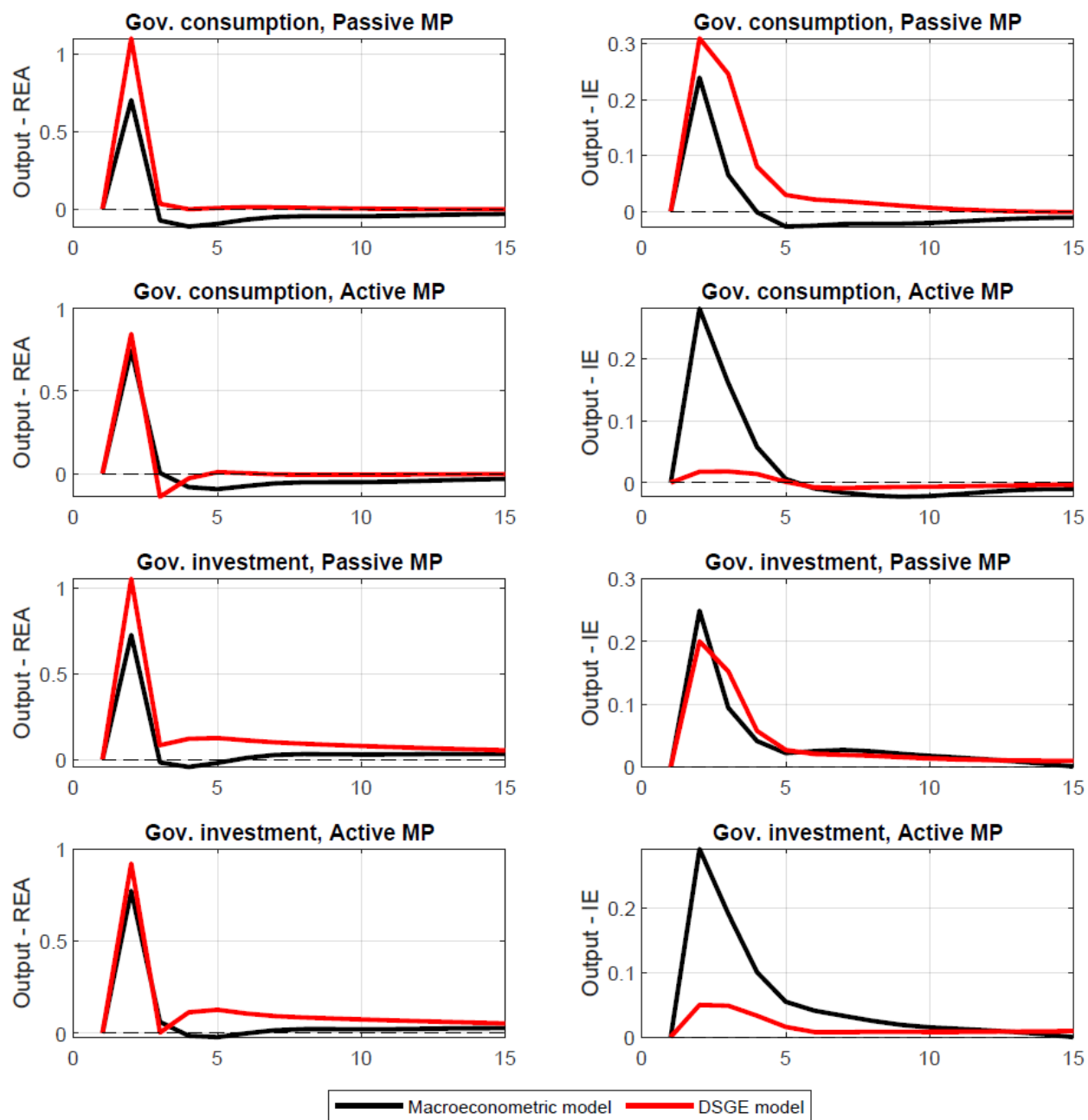


Figure 1: Responses to a one-year fiscal expansion in the rest of the euro area. Simulation results from macroeconomic model and DSGE model showing the effect of fiscal spending shocks on output in the rest of the euro area and Ireland under the assumptions of passive and active monetary policy. All responses are in percent deviations from the baseline.

Implications

We analyse fiscal spillovers that occur through three main channels (i) the trade channel, (ii) the interest rate channel, and (iii) the competitiveness channel. The size of the spillovers depends on a number of factors such as the overall size of the shock, the fiscal instrument used, the import content of both public and private spending, crowding out effects, and inflation effects. A key determinant of successful spillover effects is the assumption of supportive monetary policy. Moreover, spillovers are more persistent when government investment is the instrument used. In a best case scenario, union members with fiscal space can stimulate activity and reduce debt levels in member states who lack sufficient fiscal space to engage in expansionary fiscal policies.

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